answers 2

EasyGuide

AMILO M Series

English

FUJITSU COMPUTERS SIEMENS

Are there ...

... any technical problems or other questions which you would like to be clarified?

Please contact:

- your sales partner
- your sales outlet

Additional information is provided on the Help Desk list and in the "Warranty" manual (the "Warranty" manual is included on the "Drivers & Utilities" CD provided).

The latest information on our products, tips, updates, etc., can be found on the internet under:
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AMILO M Series

Operating manual

Introduction

Important notes

Preparing the notebook for use

Working with the notebook

Security functions

Connecting external devices

Settings in BIOS Setup Utility

Troubleshooting and tips

Technical data

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September 2004 edition

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Innovative technology ...

and an ergonomic design make your notebook a reliable, convenient mobile PC. Your operating system is pre-installed on the hard disk to facilitate the procedure when you use your notebook for the first time.

Depending on the variant, your notebook is shipped with a DVD+RW drive or a DVD±RW dual drive.

A PC card slot (CardBus or PCMIA) enables the notebook to operate a type II PC card. Your notebook is equipped with an internal modem. In addition, your notebook is equipped with a S Video out socket to connect to a television. External devices such as digital audio/video devices or other high-speed devices can be connected to the FireWire port.

For mouse control, the notebook has a touchpad.

Your notebook has connectors for external devices such as an external monitor or a printer. You can connect peripheral devices such as a scanner, loudspeakers, gamepads, keyboard, or mouse via the three USB ports.

An audio controller and two internal loudspeakers provide your notebook with an audio capability. You can also connect an external microphone and an external loudspeaker.

The system settings of the notebook can be configured via the user-friendly *BIOS Setup Utility* programme. Certain system settings (e.g. screen display, energy saving functions) can be modified via various key combinations while you are using the notebook.

Your notebook has a number of security features to ensure that no unauthorised persons can access your data. For example, you can activate a screen saver with password protection. The security functions in the *BIOS Setup Utility* also allow you to protect your data by means of passwords.

This operating manual tells you how to put your notebook into operation and how to operate it in daily use.
The illustrations in this operating manual can differ somewhat from the notebook actually shipped.

Further information about your notebook can also be found:

- in the "Safety" manual
- in the "Wireless LAN" manual
- in your operating system documentation
- in the information files (e.g. **.TXT*, **.DOC*, **.WRI*, **.HLP*)
- on the CD "Drivers & Utilities"

Notational conventions

The following symbols are used in this manual:

Indicates information which is important for your health or for preventing physical damage. Failure to follow the instructions may lead to loss of data, invalidate your warranty, destroy the notebook, or endanger your life.

Indicates important information which is required to use the system properly.

► Text which follows this symbol describes activities that must be performed in the order shown.

`This font` indicates screen outputs.

This font indicates programme names, commands, or menu items.

"Quotation marks" indicate names of chapters, data carriers, and terms that are being emphasised.

Important notes

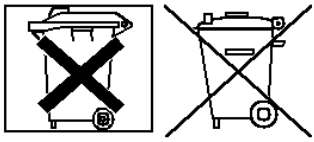
Here you will find essential safety information regarding your notebook. In addition, the manufacturer's notes contain helpful information about your notebook.

Safety notes

Pay attention to the information provided in the "Safety" manual and in the following security notes.

Observe the sections in the manual marked with the symbol on the left.

- When connecting and disconnecting cables, observe the relevant notes in this operating manual.
- When cleaning the device, please observe the relevant notes in the "Cleaning the notebook" paragraph.
- Only use batteries designed for this notebook.
  Take care not to drop the batteries or otherwise damage their casing (fire risk).
  If the rechargeable batteries are defective, they must not be used.
  Do not touch the contacts of the batteries.
  Never interconnect the positive and negative terminals of a battery.
  Used batteries must be disposed of in accordance with local regulations (special waste).
- If a lithium battery (button cell) is installed in the notebook for real-time buffering, please note that:
  The lithium battery may be replaced only by authorised personnel. Incorrect handling may lead to a risk of explosion.
  The lithium battery may be replaced only with an identical battery or with a type recommended by the manufacturer.
  The lithium battery must be disposed of in accordance with local regulations concerning special waste.
- All batteries containing pollutants are marked with one of the two symbols below (crossed-out garbage can).



In addition, the marking is provided with the chemical symbol of the heavy metal decisive for the classification as a pollutant.

Cd Cadmium

Hg Mercury

Pb Lead

- During installation and before operating the device, please observe the instructions on environmental conditions in the "Technical data" chapter as well as the instructions in the "Preparing the notebook for use" chapter.
- Keep this operating manual together with your device.
  If you pass on the device to third parties, you should include this manual.
- If you have a device with a wireless LAN, also observe the information in the section "Additional safety precautions for devices with wireless LAN".

This notebook complies with the relevant safety regulations for data processing equipment. If you have questions as to whether you can set up the notebook in the intended environment, please contact your sales point or our hotline/help desk.

Additional safety precautions for devices with wireless LAN

If a wireless LAN component is integrated in your notebook, you must be sure to observe the following safety precautions when using your notebook:

- The transmitted radio waves can cause an unpleasant humming in hearing aids.
- Switch off the notebook when you are in an aircraft or driving in a car.
- Switch off the radio components on the notebook when you are in a hospital, an operating room or near a medical electronics system. The transmitted radio waves can impair the operation of the medical devices.
- Keep the notebook at least 20 cm from a pacemaker, as otherwise the proper operation of the pacemaker may be impaired by radio waves.
- Do not let the notebook near flammable gases or into hazardous environments (e.g. paintshops) with radio components switched on, as the transmitted radio waves can cause an explosion or a fire.
- The range of the radio connection is dependent on environmental and ambient conditions.
- With data traffic via a wireless connection, it is also possible for unauthorised third parties to receive data.

The company Fujitsu Siemens Computers GmbH cannot be held responsible for radio or television faults arising from unauthorised changes made to this device. Fujitsu Siemens is, furthermore, not responsible for replacing and / or exchanging connector cables and devices which have not been specified by Fujitsu Siemens Computers GmbH. The user is solely responsible for repairing faults arising from such unauthorised changes made to a device and for replacing and/or exchanging devices.

Notes on installing and removing components

Only qualified technicians should repair the device. Unauthorised opening and incorrect repair may greatly endanger the user (electric shock, fire risk) and will invalidate your warranty.

Pull the power plug off the earthed power outlet so that the notebook is disconnected from the power supply.

Handle the locking mechanisms (locking lugs etc.) with care when replacing components (e.g. the battery).

Never use sharp objects (screwdrivers) for leverage.

Boards with electrostatic sensitive devices (ESD) are identifiable by the label shown.

When you handle boards fitted with ESDs, you must, under all circumstances, observe the following:

- You must always discharge static build up (e.g. by touching a grounded object) before working.
- The equipment and tools you use must be free of static charges.
- Remove the power plug from the mains supply before inserting or removing boards containing ESDs.
- Always hold boards with ESDs by their edges.
- Never touch pins or conductors on boards fitted with ESDs.

Manufacturer's notes

Declarations of Conformity

The "Declarations of Conformity" concerning the AMILO M can be found at our internet address: *http://www.driver-cd.com*.
Hereby, Fujitsu Siemens Computers, declares that the AMILO M is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Copyright-protected technology

This product incorporates copyright protection technology that is protected by method claims of certain U. S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorised by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorised by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

Energy Star

The notebook from Fujitsu Siemens Computers is designed to conserve electricity by dropping to less than 8 W when it goes into standby/suspend mode and to less than 3 W when it goes into OFF mode. With this level of power management, the notebook qualifies for the U.S. Environmental Protection Agency's (EPA) Energy Star Computers award.

The EPA estimates that computer equipment uses 5 % percent of all business electricity and that this is growing rapidly. If all desktop PCs and peripherals enter a low-power mode when not in use, the overall savings in electricity could amount to $ 2 milliard annually. These savings could also prevent the emission of 20 million tons of carbon dioxide into the atmosphere - the equivalent of 5 million automobiles.
As an Energy Star Partner, Fujitsu Siemens Computers GmbH has determined that this product meets the Energy Star guidelines for energy efficiency.

Energy saving

If you will not be using your notebook, switch it off.

Make use of the device's energy saving functions (see "Working with the notebook"). The notebook uses less power when the power management features are enabled. You will then be able to work for longer before having to recharge the battery.

Energy saving under Windows

If a monitor with energy saving features is connected to your notebook, you can use the *Screen Saver* tab to activate the energy saving features of the monitor. Select a screen saver in the menu *Start - Control Panel - Appearance and Themes - Display - Screen Saver*.
You may set further energy saving functions in the menu *Start - Control Panel - Performance and Maintenance - Power Options*.

There is no need for a screen saver for the LCD panel since the LCD screen is turned off via the energy saving functions.

Recycling and disposal

Do not throw batteries or accumulators into the household waste.

Our devices are mostly produced of materials that can be turned over for proper recycling. The device may be taken back after use to be recycled, provided that it is returned in a condition that is the result of normal use. Any components not reclaimed will be disposed of in an environmentally acceptable manner. To give back a device please take advantage of your country's disposal and recycling possibilities.

Further information about country-specific disposal and recycling possibilities can be found on the following website *www.fujitsu-siemens.com/recycling*.

If you have any questions on disposal, please contact your local office or our Help Desk.

CE marking

CE marking for devices without wireless LAN

The shipped version of this device complies with the requirements of the EEC directives 89/336/EEC "Electromagnetic compatibility" and 73/23/EEC "Low voltage directive".

CE marking for devices with wireless LAN

This equipment complies with the requirements of Directive 1999/5/EC of the European Parliament and Commission from 9 March, 1999 governing Radio and Telecommunications Equipment and mutual recognition of conformity.

This notebook is approved for use in Belgium, Denmark, Germany, Finland, Greece, Great Britain, Ireland, Italy, Luxembourg, the Netherlands, Austria, Portugal, Sweden, Switzerland, Spain, Iceland, Liechtenstein and Norway. Contact the corresponding government office of the respective country for current information on possible operating restrictions. If your country is not included in the list, then please contact the corresponding supervisory authority as to whether the use of this product is permitted in your country.

Transporting the notebook

Please observe the points listed below when transporting your notebook.

Before you travel

- Back up important data stored on your hard disk.
- Switch off the radio component (Wireless LAN) for security reasons when youn cannot exclude that the transmitted radio waves can negatively affect electrical and electronic devices in your surrounding area.
- If you wish to use your notebook during a flight, first check with the flight attendants if it is permissible to do so.
- If you are travelling abroad, ensure that the power adapter can be operated with the local mains voltage. If this is not the case, obtain the appropriate power adapter for your notebook. Do not use any other voltage converter!

If you travel in another country, check whether the local power supply and the specifications of the power cable are compatible. If this is not the case, buy a power cable that matches the local conditions. Do not use a connection adapter for electrical devices to connect the notebook.

If you use a modem, incompatibilities with the local telecommunications system may result.

Transporting the notebook

- Remove all data carriers (e.g. CD, DVD) from the drives.
- Switch the notebook off.
- Unplug the power adapter and all external devices from the mains outlet.
- Disconnect the power adapter cable and the data cables for all external devices.
- Close the LCD screen so that it locks into place.
- To protect against damaging jolts and bumps, use a notebook carrying case to transport your notebook.
- Protect the notebook from severe shocks and extreme temperatures (e.g. direct sunlight in a car).

Cleaning the notebook

► Switch the notebook off.

► Pull the power plug of the network adapter out of the mains outlet.

Do not clean any interior parts yourself; leave this job to a service technician.

Do not use any cleaning agents that contain abrasives or may corrode plastic. The use of improper cleaning agents can damage the markings on the keyboard and the notebook, the paintwork of the device or the device itself.

Ensure that no liquid enters the notebook.

Wipe the casing with a dry cloth.
If particularly dirty, use a cloth which has been moistened in mild domestic detergent and then carefully wrung out.

To clean the keyboard and the touchpad, you can use disinfectant wipes.

Preparing the notebook for use

Please read the "Important notes" chapter.

Before you can work with your notebook, you need to charge the battery and install and configure the delivered software. The operating system and drivers required are preinstalled.

You need to charge the battery if you want to operate your notebook with a rechargeable battery.

When not plugged into a mains outlet, the notebook runs on its built-in battery. You can increase the battery's life by enabling the system's energy saving functions.

If you use the notebook in a normal office situation, run it from the mains using the power adapter.

Please see the "Connecting external devices" chapter for instructions on how to connect devices such as a mouse and a printer to the notebook.

Unpacking and checking the delivery

► Unpack all the individual parts.

► Check the delivery for damage incurred during transportation.

Should you discover damages incurred during transportation, notify your local sales outlet immediately!

Do not discard the original packing material of the devices. Keep the original packing material in case you need to ship the equipment again.

Selecting a location

Select a suitable location for the notebook before setting it up. Consider the following points when looking for a location:

- Do not place it on a soft surface (e.g., a carpet or soft furnishings). The space between the notebook's feet must be clear.
  Place the notebook on a stable, flat, nonslippery surface. In view of the multitude of different finishes used on furniture, it is possible that the rubber feet of the notebook will mark the surface they stand on.
- Never place the notebook and the power adapter on a heat-sensitive surface.
- The notebook and the power adapter should be at least 200 mm apart.
- Keep other objects 100 mm away from the notebook and its power adapter to ensure adequate ventilation.
- Never cover the fan intake or exhaust openings of the notebook or the power adapter.

- Do not expose the notebook to extreme environmental conditions.
  Protect the notebook from dust, humidity, and heat.
- For wireless data transfer, you must align the notebook's infrared interface with that of the partner device (e.g. PC). The devices must not be more than one metre apart.

Connecting the power adapter

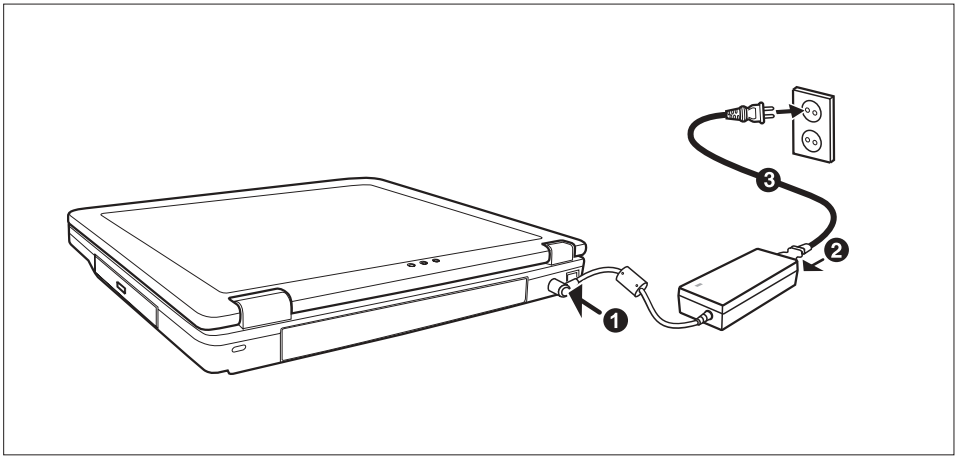
Please take note of the information in the section "Safety notes".

The power cable supplied conforms to the requirements of the country in which you purchased your notebook. Make sure that the power cable is approved for use in the country in which you intend to use it.

The power adapter's AC cord should only be connected to a mains outlet if the notebook is connected to the power adapter.

Do not use the power adapter for other notebooks or devices.

Do not use a power adapter that is not specially intended for this notebook.



► Connect the power adapter cable to the DC jack (DC IN) of the notebook (1).

► Connect the power cable into the power adapter (2).

► Plug the power cable into the mains supply (3).

Working with the notebook

This chapter describes the basics for operating your notebook.

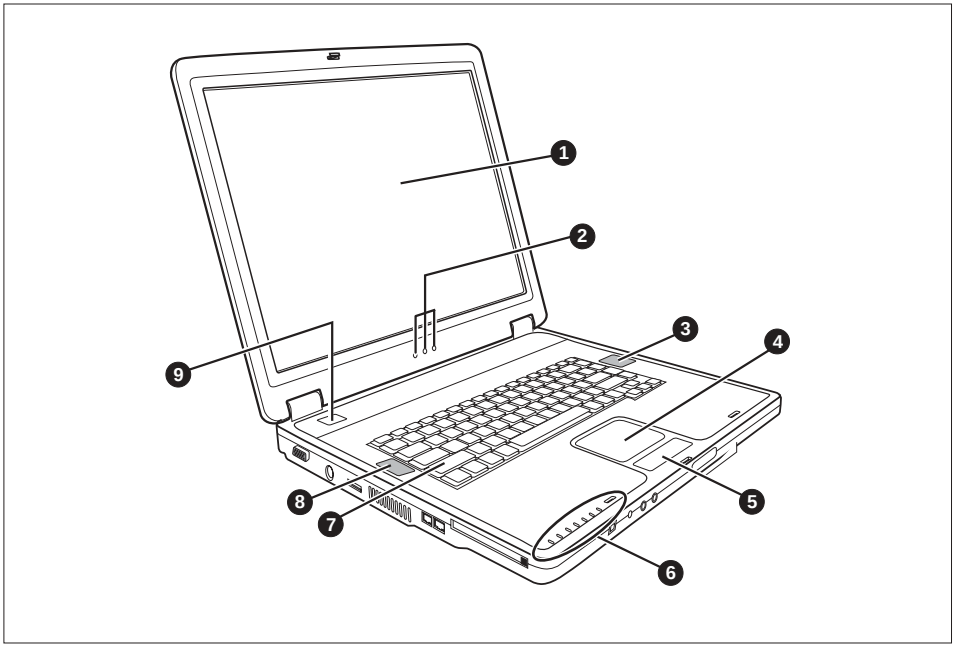
Please see the "Connecting external devices" chapter for instructions on how to connect devices such as a mouse and a printer to the notebook.

Please take note of the information in the "Important notes" chapter.

Views

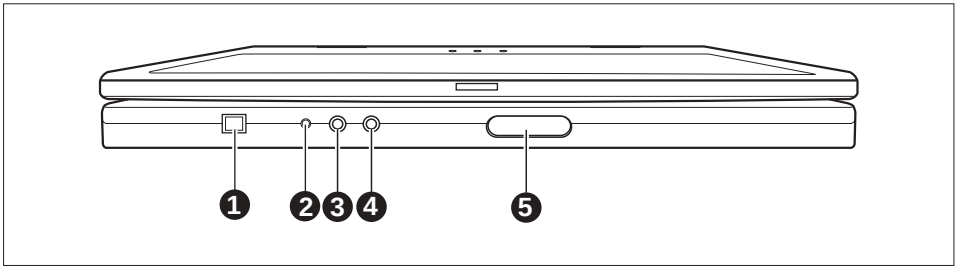
In this section the various hardware components of your notebook are introduced. You can open an overview of the displays and connections of the notebook. Please familiarise yourself with these components before you start to work with your notebook.
The illustrations in this operating manual can differ somewhat from the notebook actually shipped.

Opened Notebook



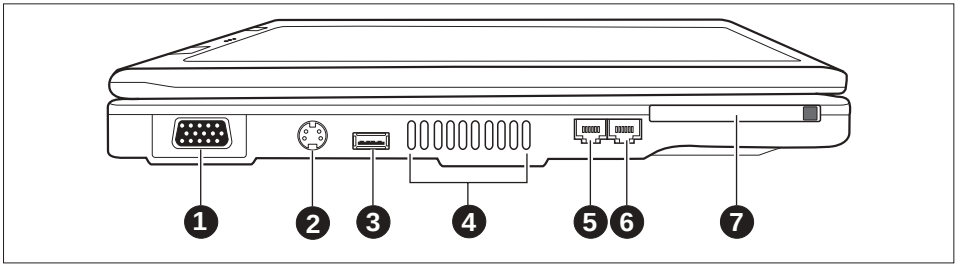
1 = LCD screen
2 = Status indicators
3 = Loudspeakers
4 = Touchpad
5 = Touchpad button
6 = Status indicators
7 = Keyboard
8 = Loudspeakers
9 = ON/OFF switch

Front



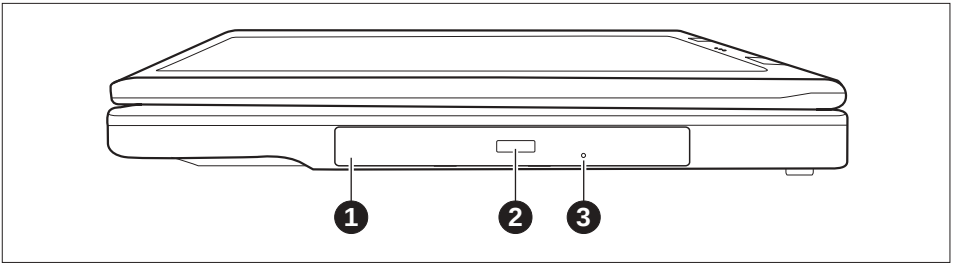
1 = FireWire port
2 = SPDIF port
3 = Line-In
4 = Microphone jack
5 = Memory card reader

Left side panel



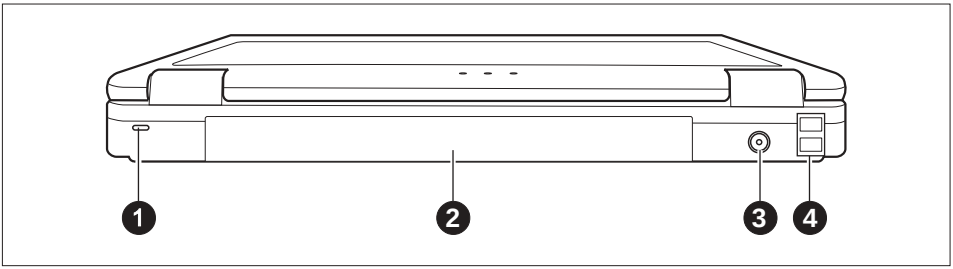
1 = Monitor port
2 = S Video out socket
3 = USB port
4 = Ventilation slots
5 = Modem port
6 = LAN port
7 = PC card slot

Right side panel



1 = Optical drive
2 = Insert/eject button of optical drive
3 = Opening for manual ejection

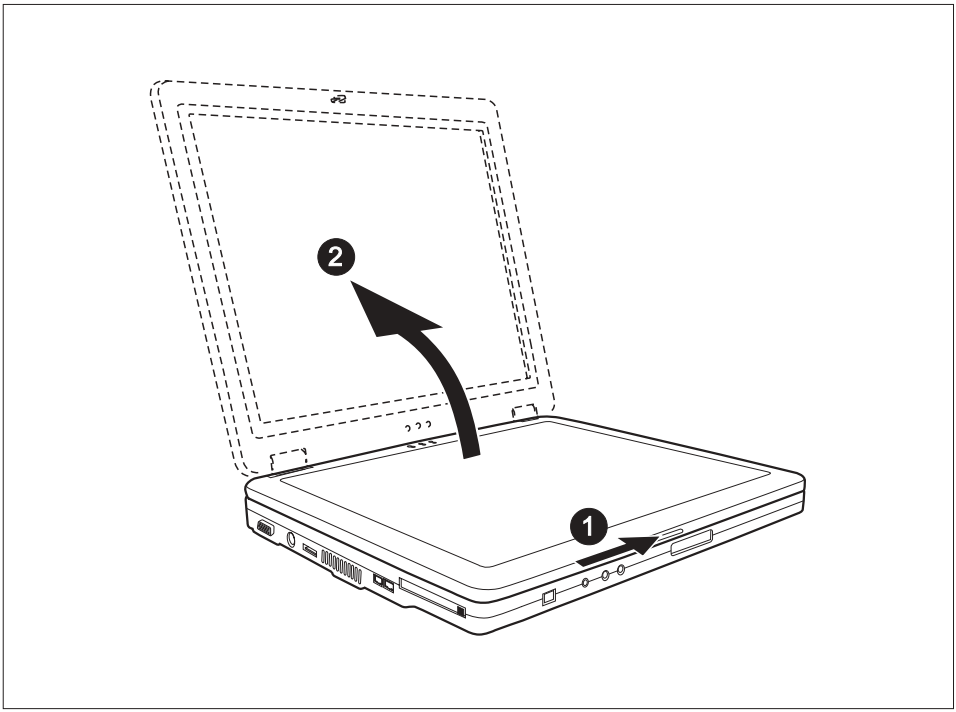
Back panel



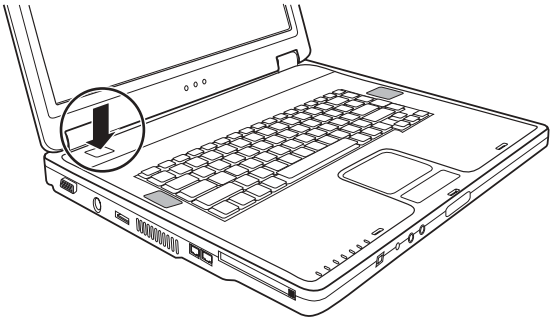
1 = Kensington Lock device
2 = Battery
3 = DC jack (DC IN)
4 = USB ports

Switching the notebook on and off

Switching on the notebook



► Slide the release button in the direction of the arrow (1) and unfold the LCD screen upward (2).



► Press the ON/OFF switch ⏻ to switch the notebook on.

i If you have assigned a password, you must enter this when requested to do so, in order to start the operating system password.

Switching off the notebook

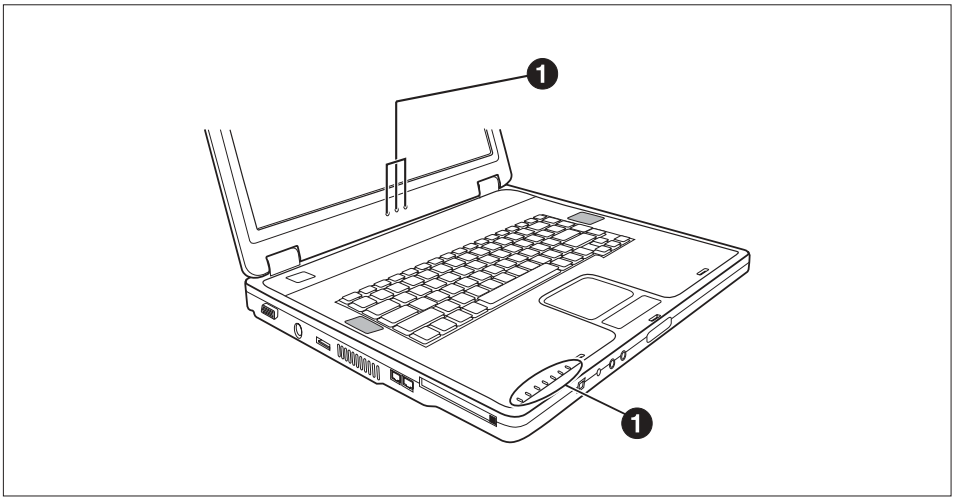
► Shut down the operating system properly in the *Start* menu via the *Quit* function.

► If the notebook is not switched off automatically, press the ON/OFF switch for approx. five seconds.

► Close the LCD screen so that it locks into place.

Status indicators

The status indicators provide information about the status of the power supply, the drives and the keyboard functions.



The status indicators (1) provide information about the status of the power supply, the drives and the keyboard functions.

The meanings of the status indicators are as follows:

Power indicator

- The indicator lights up green: The power adapter is supplying power to the notebook.
- The indicator flashes: The power adapter is supplying power to the notebook and the notebook is in the Standby mode.

Battery indicator

- The indicator lights up green: The battery is supplying power to the notebook.
- The indicator flashes: The battery is supplying power to the notebook and the notebook is in the Standby mode.

Battery charging indicator

- The indicator lights up green: The power adapter is supplying power to the notebook. The battery is fully charged.
- The indicator is orange: The battery is charging.
- The indicator flashes red: The battery is nearly empty.

Hard disk indicator

The indicator lights up: The hard disk is being accessed.

CD/DVD indicator

The indicator is lit: The CD/DVD in the optical drive is being accessed.

Num Lock indicator

The indicator lights up: the **Num Lock** key has been pressed. The virtual numeric keypad is activated. In the case of overlay keys, the character printed on the upper right of the key appears when that key is pressed.

Caps Lock indicator

The indicator lights up: the Caps Lock key has been pressed. All the characters you type appear in uppercase. In the case of overlay keys, the character printed on the upper left of the key appears when that key is pressed.

Scroll indicator (Scroll Lock)

The key combination **Fn** + **Scr** has been pressed. The effect this key has varies from programme to programme.

Indicator Wireless LAN

The indicator lights green: the key combination **Fn** + **F1** has been pressed. The radio component is enabled.

Memory card indicator

The indicator lights up when the memory card in the memory card reader is accessed. Do not remove the memory card from the slot when the indicator is on.

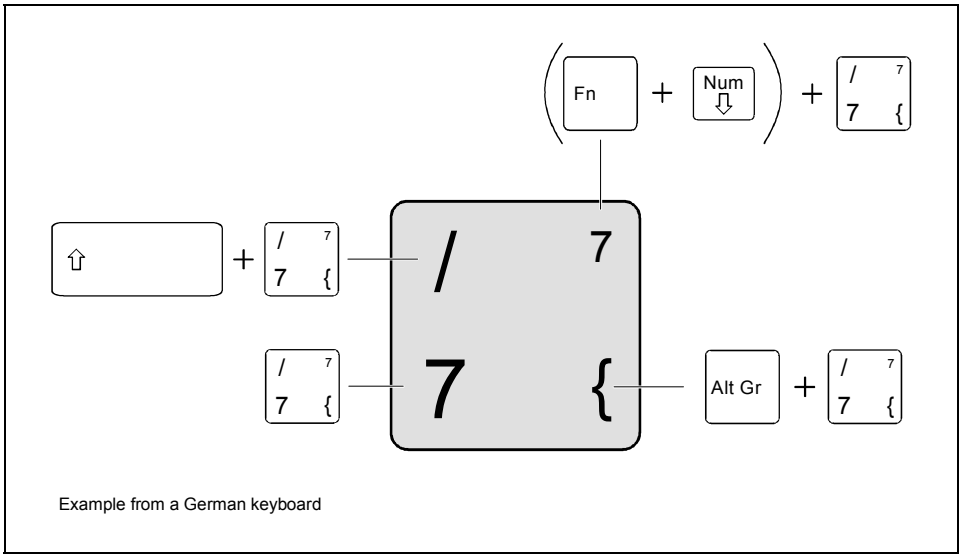
Keyboard

The keyboard of your notebook is subject to continuous wear due to normal use. The keyboard markings are subjected to particularly high loads. The keyboard markings can wear off in the course of using the notebook.

The keyboard has been designed to provide all the functions of an enhanced keyboard. Some enhanced keyboard functions are mapped with key combinations.

The following description of keys refers to Windows. Additional functions supported by the keys are described in the relevant manuals supplied with your application programmes.

The figure below shows how to access the different characters on keys with overlaid functions.



Example from a German keyboard

Backspace key
The Backspace key deletes the character to the left of the cursor.

Tab key
The Tab key moves the cursor to the next tab stop.

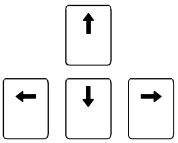
Enter key (return)
The enter key terminates a command line. The command you have entered is executed when you press this key.

Caps Lock key
The Caps Lock key activates uppercase mode (Caps Lock indicator lit). The Caps Lock function causes all the characters you type to appear in uppercase. In the case of overlay keys, the character printed on the upper left of the key appears when that key is pressed.
You can deactivate the uppercase mode with the caps key (Caps Lock display no longer lights up).

Shift key
The Shift key causes uppercase characters to appear. In the case of overlay keys, the character printed on the upper left of the key appears when that key is pressed.

Alt Gr key
The **Alt Gr** key allows one to type the characters printed on the lower right of the keycaps (e.g. { in the case of the **7** key on the German keyboard).

Fn key
The **Fn** key enables the special functions indicated on overlay keys (see "
Virtual numeric keypad").
If the external keyboard does not feature an **Fn** key, you can simultaneously press the **Ctrl** + **Alt Gr** keys or the **Ctrl** + **Alt** keys.



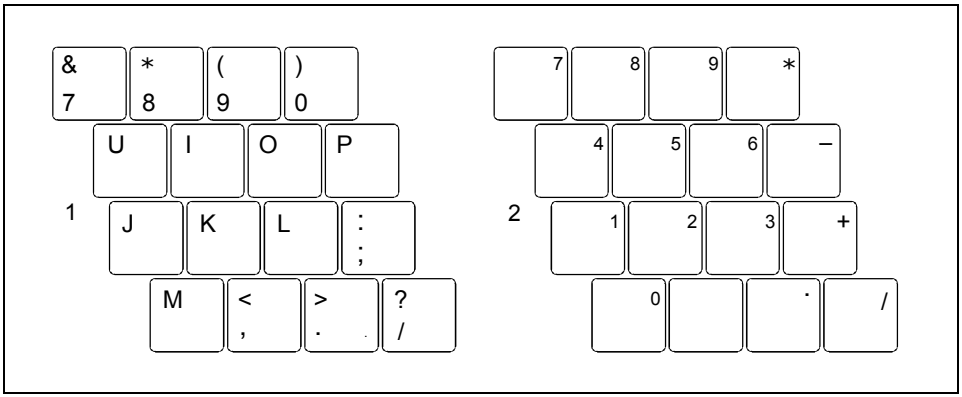
Cursor keys
The cursor keys move the cursor in the direction of the arrow, i.e. up, down, left, or right.

Start key
The Start key invokes the Windows Start menu.

Menu key
The Menu key invokes the menu for the marked item.

Virtual numeric keypad

The keyboard of your notebook does not have a separate number block. To provide the convenience of a numeric keypad, your keyboard is equipped with a virtual numeric keypad. The special keys of the virtual numeric keypad are recognisable by the numbers and symbols printed in the upper right corner of each key. If you have switched on the virtual numeric keypad (**NumLK** key), you can output the characters shown on the upper right of the keys.



1 = Characters enabled when Num Lock indicator is not lit (see "Status indicators").
2 = Characters enabled when Num Lock indicator is lit (see "Status indicators").

Key combinations

The following description of key combinations refers to functions when using Microsoft Windows. Some of the following key combinations may not function in other operating systems and with some device drivers.

Other key combinations are described in the relevant manuals supplied with your application programmes.

Key combinations are performed as follows:

- ► Press and hold the first key in the combination.
- ► While holding the first key down, press the other key or keys in the combination.

i If the external keyboard does not feature an **Fn** key, you can simultaneously press the **Ctrl** + **Alt Gr** keys or the **Ctrl** + **Alt** keys.

Fn + F1

Switching wireless LAN on/off

This key combination switches your notebook's wireless component on and off.

Fn + F3

Reducing the volume

This key combination reduces the volume of the integrated loudspeakers.

Fn + F4

Increasing the volume

This key combination raises the volume of the integrated loudspeakers.

Fn + F5

Switching between internal and external screen

If an external monitor is connected, the monitor on which the output is to be displayed can be selected with this key combination.

You can opt to use:

- just the notebook's LCD screen
- just the external monitor
- both the LCD screen and the external monitor.

Fn + F6

Decreasing screen brightness

This key combination decreases screen brightness.

Fn + F7

Increasing screen brightness

This key combination increases screen brightness.

Fn + F10

Switching the loudspeakers on and off

This key combination switches your device's integrated loudspeakers off and on.

Fn + F11

Switching the LCD screen on and off

This key combination switches the LCD screen off. The next input switches the display on again.

Fn + F12

Power-Saving Mode

Switches the notebook into the energy-saving mode.

⇧ + ⇤⇥

Backtab (Shift+Tab)

This key combination moves the cursor back to the previous tabular stop.

Ctrl + Alt + Del

Carrying out a warm boot

This key combination triggers a reset and warm-boots the notebook. First hold down the **Ctrl** and **Alt** key, and then press the **Del** key. Under Windows 98, Windows 2000, Windows Me and Windows NT the Task Manager appears first. Then you must press all three keys again to re-boot.

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Key combinations with the Windows keys are contained in the manual for your operating system.

Closed cover switch

The lid switch is a contact switch that causes the notebook to switch into the Standby mode when the LCD screen is folded closed. You can set the lid switch under Windows XP.

Select the *Advanced* tab under *Start* - *Settings* - *Control Panel* - *Energy Options* to set the closed cover switch.

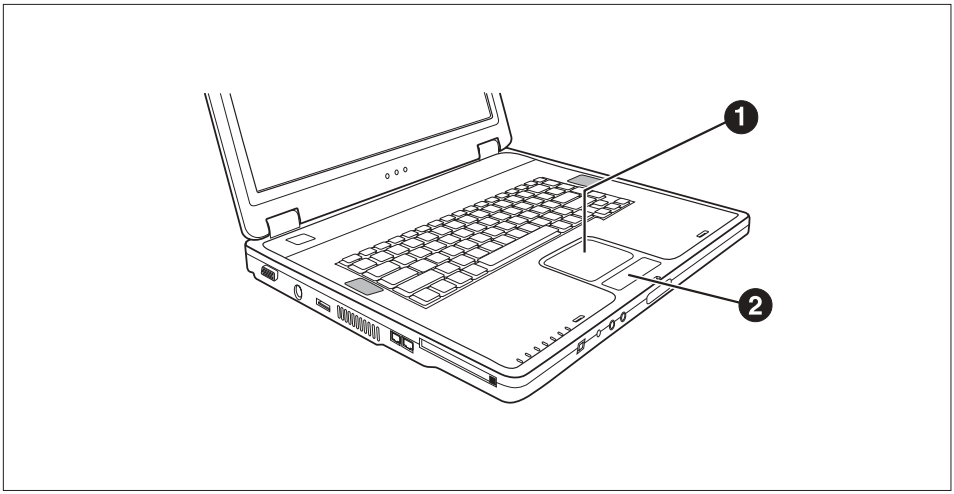
Touchpad and touchpad button

Keep the touchpad clean, protect it from dirt, liquids, and grease.

Do not use the touchpad if your fingers are dirty.

Do not rest heavy objects (e.g. books) on the touchpad or the touchpad buttons.

The touchpad enables you to move the mouse pointer on the screen. The touchpad buttons allow the selection and execution of commands. They correspond to the buttons on a conventional mouse.



1 = Touchpad

2 = Touchpad button

Moving the pointer

► Move your finger on the touchpad.

The pointer will move accordingly.

Selecting an item

► Move the pointer to the item you wish to select.

► Tap the touchpad once or press the left side of the touchpad button once.

The item will be selected.

Executing a command

► Move the pointer to the field you wish to select.

► Tap the touchpad twice or press the left side of the touchpad button twice.

The command will be executed.

Dragging an object

► Move the pointer to the item you wish to select.

► Select the desired object and hold down the left side of the touchpad button.

► Drag the object to the desired position.

► Lift your finger from the touchpad.

The item will be moved.

LCD screen

Information on LCD monitor

High-quality TFT displays are installed in notebooks from Fujitsu Siemens Computers GmbH. The specification of the monitor resolution indicates how many pixels can be displayed. For example, "XGA" stands for 1024 x 768 pixels. Each pixel consists of three so-called subpixels of the colours red, green and blue. As a result, an XGA monitor consists of 1024 x 768 x 3 = 2,359,296 subpixels.

The standard of production techniques today cannot guarantee an absolutely fault-free monitor. A few isolated constant lit or unlit pixels may be present. To ensure the highest possible quality, Fujitsu Siemens Computers uses only monitors that at least comply with the standard DIN ISO 13406-2 (Class II).

TFT screens are operated with background lighting. The luminosity of the background lighting can decrease during the period of use of the notebook. The brightness of your monitor can be set individually with the brightness control keys of the keyboard.

Monitor settings

Setting resolution (under Windows)

You can change the screen resolution under *Start - Settings- Control Panel - Display - Settings* and then selecting from the *Resolution* field.

Changing the LCD screen brightness

You can adjust the brightness of your LCD display with the keys **Fn** and **F6** or **F7**.

Changing the font size

Under *Start - Control Panel - Appearance and Themes - Display - Appearance* you can choose between a larger and a smaller font in the *Font size* field.

Synchronising the display on the LCD screen and an external monitor

Your notebook supports the simultaneous display on the LCD screen and an external monitor. Pressing the key combination Fn + F5 switches between LCD only, external monitor and LCD and external monitor only. The last setting is useful if you would like high resolution and refresh rate on an external monitor.

Battery

The battery is one of the most important components of your notebook. When not plugged into a mains outlet, the notebook runs on its built-in battery. You can increase the life of the battery by caring for the battery properly. The average battery life is around 500 charge/discharge cycles. You can extend the battery life by taking advantage of the available energy saving functions.

Charging, caring for and maintaining the battery

The notebook battery can only be charged, when the ambient temperature is between 5 °C and max. 40 °C.

You can charge the battery by connecting the notebook to the power adapter (see "Connecting the power adapter"). Information on the battery charging time is contained in the "Technical data" chapter.

It is a good idea to discharge the battery completely before recharging it, as this will extend battery lifetime. Work in the battery mode until an acoustic warning prompts you to recharge and the power-on indicator begins to flash. The notebook battery should not be charged before this point.

If you do not connect the power adapter within five minutes of the signals described above, your notebook will automatically switch off.

Monitoring the battery charging level

Windows also has a "Battery status meter" in the taskbar for monitoring the battery capacity. When you place the mouse pointer on the battery symbol, the system displays the battery status.

Removing and installing the battery

Only use batteries released for your notebook.

Never use force when inserting or removing a battery.

Take care not to drop the batteries or otherwise damage their casing (fire risk).

Do not touch the contacts of the batteries.

Never interconnect the positive and negative terminals of a battery.

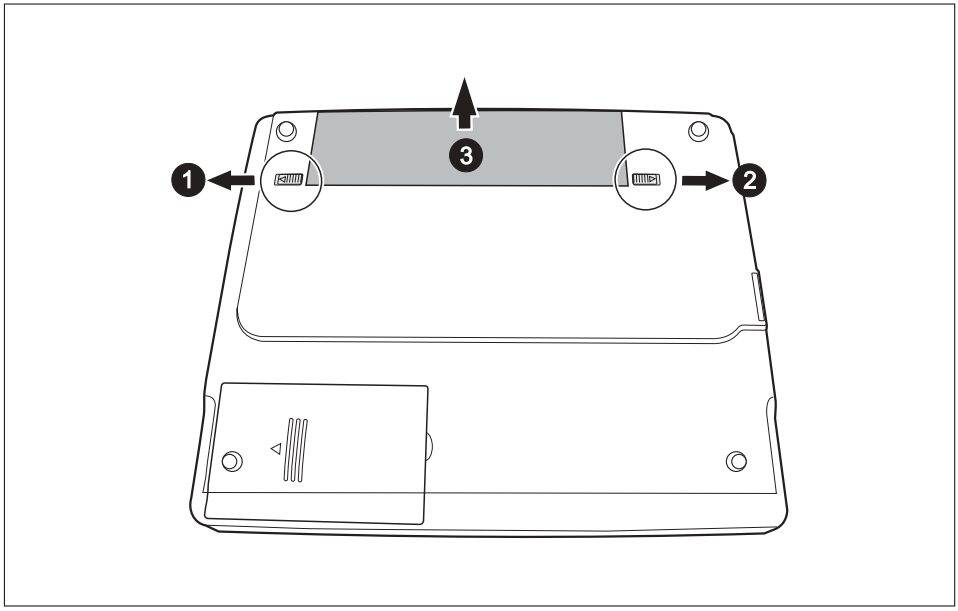
If the rechargeable batteries are defective, they must not be used.

Used batteries must be disposed of in accordance with local regulations (special waste).

Make sure no foreign objects get into the battery compartment.

Removing battery

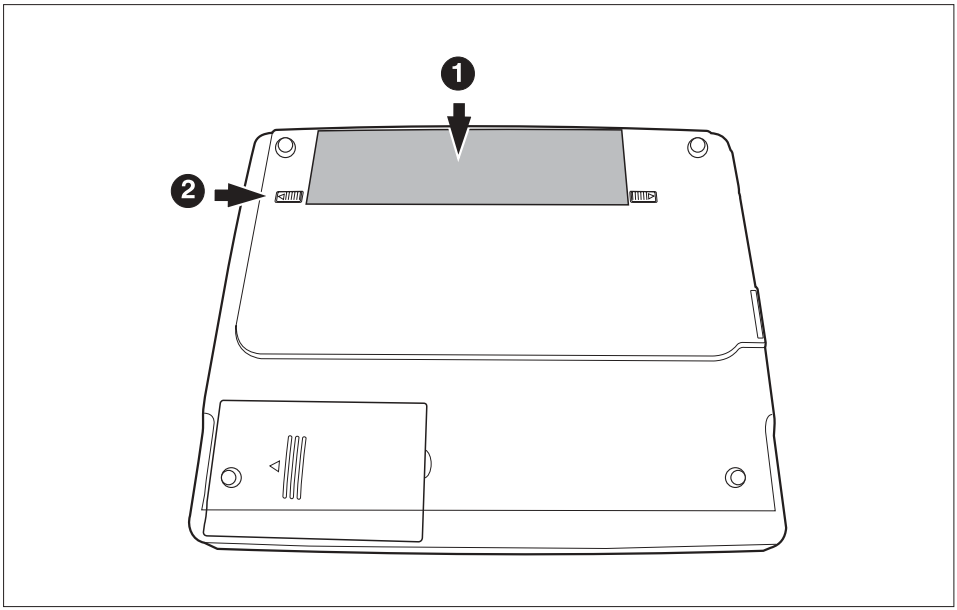
- ► Switch the notebook off.
- ► Close the LCD screen so that it locks into place.
- ► Unplug the power adapter from the mains outlet.
- ► Disconnect all cables connected to the notebook.
- ► Turn the notebook over.
- ► Place the notebook on a flat surface.



- ► Unlock the battery lock by pushing the lever (1) in the direction of the arrow as far as it will go.
- ► Slide the battery lock in the direction of the arrow (2) and hold it in place.

► Remove the battery from the battery compartment (3).

Insert battery



► Place the battery in the battery slot so that the contacts enter first.

► Push the battery into the battery compartment until it engages (1).

► Push the lever (2) in the direction of the arrow up to the stop (2).

Using the power-management features

The notebook uses less power when the power management features are enabled. You will then be able to work longer when using the battery before having to recharge it.

If you are connected to a network or use an integrated modem, PC LAN card, or PC modem card, we advise against enabling an energy saving mode. This could lead to an interruption of your network connection.

When not using the notebook for long periods of time, first end the energy saving mode, then switch off the notebook. Never switch the notebook off with the Suspend/Resume button while the notebook is in one of the energy-saving modes.

If your notebook is in an energy-saving mode:

- Do not connect any external devices.
- Do not disconnect any external devices.
- Do not attempt to switch the notebook on if the built-in battery is flat.
- Do not add or remove RAM.
- Do not add or remove a PC card.

The operating system uses ACPI (Advanced Configuration and Power Interface) for power management under Windows XP. The energy saving functions can be activated under *Start - Control Panel - Performance and Maintenance - Power Options*.
Under Windows, *Hibernate* is activated by default.

PC cards

A PC card slot (CardBus or PCMIA) enables the notebook to operate a type II PC card.

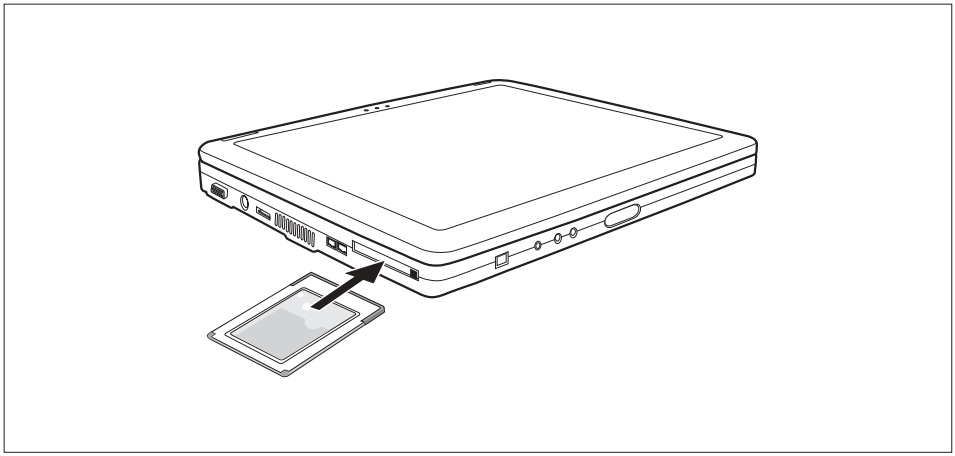
Consult the documentation supplied by the PC card's manufacturer and follow the instructions provided.

Never use force when inserting or removing a PC card.

Make sure that foreign objects do not fall into the PC card slot.

Installing a PC card

► Insert the PC card, contacts first, into the slot guide. The labelled side of the PC card should be facing upward.



► Gently push the PC card into the slot until you feel it click into place.

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Consult the documentation supplied with the PC card for information on how to install the necessary device drivers.

Also observe the corresponding information files (e.g. **.TXT*, **.DOC*, **.WRI*, **.HLP* or **.PDF*) on the driver CD and in the user manual of the operating system.

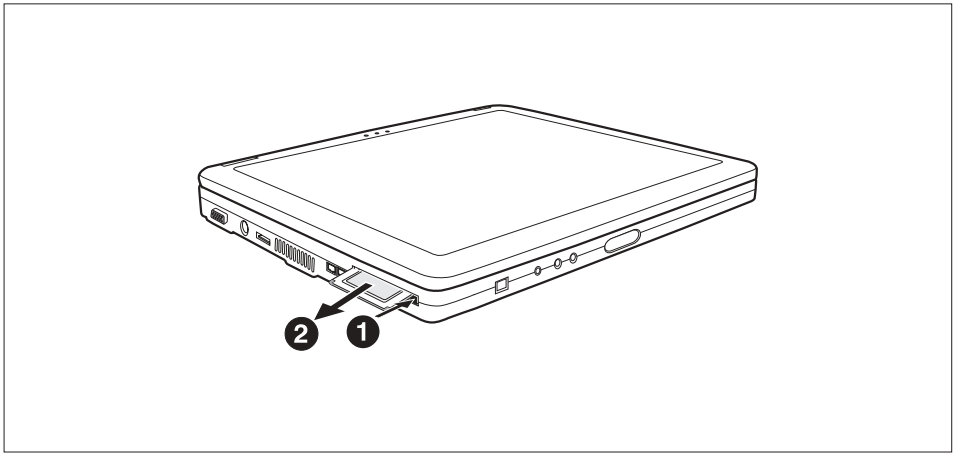
You can push the PC card slot eject button into the notebook casing. Press the eject button until it snaps in. This prevents the PC card from being ejected accidentally.

Removing a PC card

Use the small PC card icon located in your task bar to stop the card:

- ► Click on the symbol in the taskbar with the left mouse button.
- ► Select the PC card you want to stop and remove.
- ► Press the Enter key.

Wait for the dialogue box which tells you that it is now safe to remove the PC card.



- ► Press the eject button (1). The PC card will project further out of the notebook's case. If the eject button is lowered, you must first cause the eject button to release from the notebook casing. To do this, press the eject button until it releases.
- ► Slide the PC card out of the notebook (2).

Hard disk

The hard disk is the most important storage medium of your notebook. You can work considerably faster and more efficiently if you copy applications and files from the optical drive to your hard disk.

When the hard disk is accessed, the hard disk indicator lights up.

Optical drive

Your notebook is delivered with an optical drive.

Optical drives can either only read or both read and write different optical data storage media. The meaning of the respective optical data storage media is described in the following:

CD-ROM

Abbreviation for **C**ompact **D**isc - **R**ead **O**nly **M**emory. A CD-ROM is an optical data storage medium that can contain a maximum of 700 Mbytes. These data cannot be changed.

CD-R

Abbreviation for **C**ompact **D**isc **R**ecordable. A CD-R is an optical data storage medium that can only be written with a maximum of 700 Mbytes of data. Then these data cannot be changed, but can be read as often as desired.

CD-RW

Abbreviation for **C**ompact **D**isc **R**e**W**riteable. A CD-RW is an optical data storage medium that can be written with a maximum of 700 Mbyte of data a virtually unlimited number of times. This means the data can be deleted and changed.

DVD (DVD-ROM and DVD video)

Abbreviation for **D**igital **V**ersatile **D**isc or **D**igital **V**ideo **D**isc. A DVD is an optical data storage medium that can contain a maximum of 17 Gbytes of data. These data cannot be changed.

DVD+R/DVD-R

Abbreviation for **D**igital **V**ersatile **D**isc **R**ecordable or **D**igital **V**ideo **D**isc **R**ecordable. A DVD+R or a DVD-R is an optical data storage medium that can only be written once with a maximum of 4.7 Gbytes of data. Then these data cannot be changed, but can be read as often as desired.

DVD+R and DVD-R are different standards. DVD+Rs and DVD-Rs can only be written by drives which support the respective standard.

DVD+RW/DVD-RW

Abbreviation for **D**igital **V**ersatile **D**isc or **D**igital **V**ideo **D**isc **R**e**W**riteable. A DVD+RW or a DVD-RW is an optical data storage medium that can be written with a maximum of 4.7 Gbytes of data virtually an unlimited number of times. This means the data can be deleted and changed.

DVD+RW and DVD-RW are different standards. DVD+RWs and DVD-RWs can only be written by drives which support the respective standard.

DVD+RW drive

The DVD+RW drive in your notebook contains a light-emitting diode (LED), classification as per IEC 825-1:1993: CLASS 1 LASER, and may therefore not be opened.

With the DVD+RW drive you can read all optical data storage media named above. You can also write CD-R, CD-RW, DVD+R and DVD+RW.

DVD±RW dual drive

The DVD±RW dual drive in your notebook contains a light-emitting diode (LED), classified in accordance with IEC 825-1:1993 as a CLASS 1 LASER, and may therefore not be opened.

With the DVD±RW dual drive you can read all optical data storage media named above. You can also write CD-Rs, CD-RWs, DVD+Rs, DVD+RWs, DVD-Rs and DVD-RWs.

Handling CD/DVDs

From this point all different optical data storage media will be referred to as CD/DVDs; the writeable optical data storage media are called blanks.

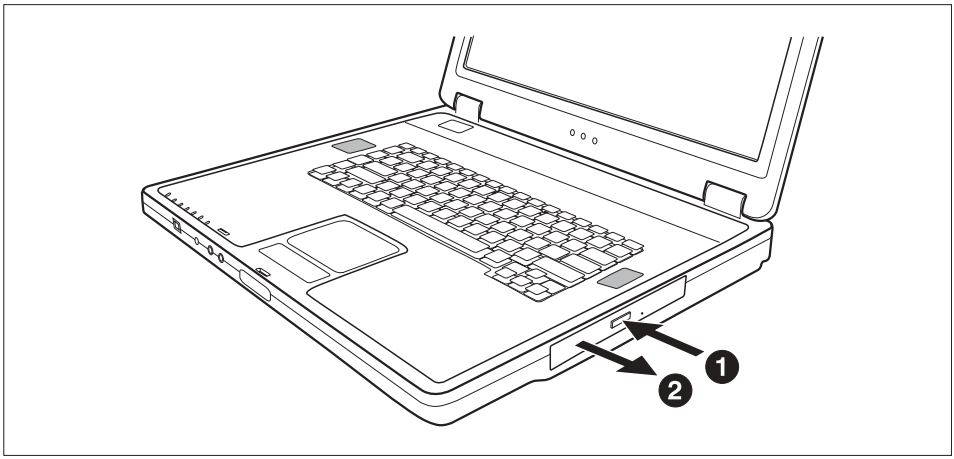
Observe the following when handling CD/DVDs:

- Avoid touching the surface of a CD/DVD. Handle CDs/DVDs only by their edges!
- Always store CDs/DVDs in their cases. Thus you avoid dust contamination, scratches, bending or other damage.
- Protect your CDs/DVDs from dust, mechanical vibration and direct sunlight!
- Avoid storing a CD/DVD in areas subject to high temperatures or humidity.

To utilise the optimum writing speed, use CD blanks marked "Multispeed" or "High Speed".

Inserting or removing a CD/DVD

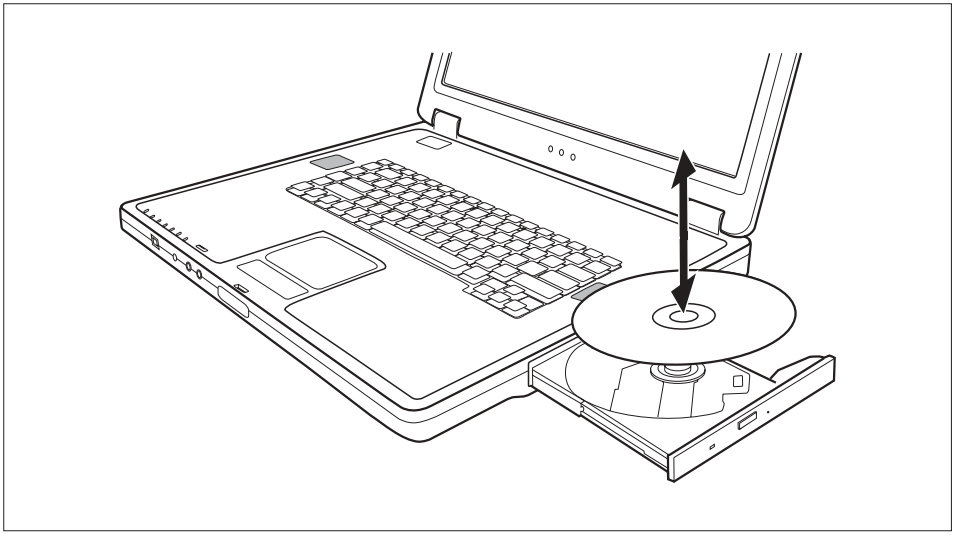
The notebook must be switched on.



► Push the insert/eject button.

The drive tray will open.

► Pull the drive tray completely out.



► Place the CD/DVD in the drive tray with the label facing upwards.

or

► Take out an inserted CD/DVD.

► Push in the drive tray until you feel it lock into place.

Manual removal (emergency removal)

In the event of a power failure or damage to the drive it may be necessary to manually remove the CD/DVD.

► Switch the notebook off.

► Push a pen or a piece of wire (such as a paper clip) into the opening for manual ejection (see "Front" section).

The drive tray is unlocked. You can now pull the drive tray out of the drive.

Regional codes for DVD films and DVD players

DVD films and DVD players (e.g. the optical drive of your notebook) are always provided with a regional code. The regional codes of DVD films and DVD players must match so that the DVD film can be played back.

There are six different regional codes:

- Regional code 1: USA and Canada
- Regional code 2: Egypt, Europe, Japan, South Africa and the Middle East
- Regional code 3: Southeast Asia (including Hong Kong, Indonesia, Philippines, South Korea, Taiwan)
- Regional code 4: Australia, New Zeeland, Southeastern Pacific, Central and South America and the Caribbean
- Regional code 5: Africa (except South Africa), India and the former states of the USSR
- Regional code 6: China

The optical drive of your notebook supports the function RPC-II (Phase II System of Regional Playback Control). This function permits the final user to change the regional code of the drive up to five times to play back corresponding DVD films. Then the last regional code selected is retained and cannot be changed again.

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If a DVD film is to be playable in all regions, it has the regional code 0.

Before buying a DVD film you should check that the regional code of the DVD film matches the regional code set for the optical drive of your notebook.

Adjusting AutoPlay function of optical drive

With the AutoPlay function you can specify whether or not a program or action is to be run/carried out depending on the CD/DVD content type of Windows XP. For example, you can specify that when an Audio CD is inserted, the Media Player is automatically started and automatically plays the Audio CD.

You can set the AutoPlay function of the optical drive according to your needs. Proceed as follows:

► Click on the Start menu with the right mouse button or touchpad key.

A context menu appears.

► Click on *Explorer*.

► Click on the corresponding drive with the right mouse button or touchpad key.

A context menu appears.

► Click on *Properties*.

► Click on the *AutoPlay* tab.

► Adjust the AutoPlay function to meet your needs.

i Please note that you must select the desired action and confirm it with *Apply* for each individual CD/DVD content type.

Audio: Setting volume

► Set the desired volume with the key combination Fn + F3 or Fn + F4.

Or

► To adjust the volume use the Windows volume control from the *Start* menu - *All Programs* - *Accessories* - *Multimedia* - *Volume Control*.

Integrated 56k modem

The integrated 56k modem supports all data communication applications, such as:

- Modem operation: High-speed downloads at up to 56,000 bit/s (V.9x). Downward-compatible to V.34 modems.
- Fax mode: Transmitting and receiving at up to 14,400 bit/s
- Simple country adaptation with programme

The modem complies with the EU Directive 91/263/EEC (Telecommunications terminal equipment directive) and has been checked in agreement with the guideline TBR-21.

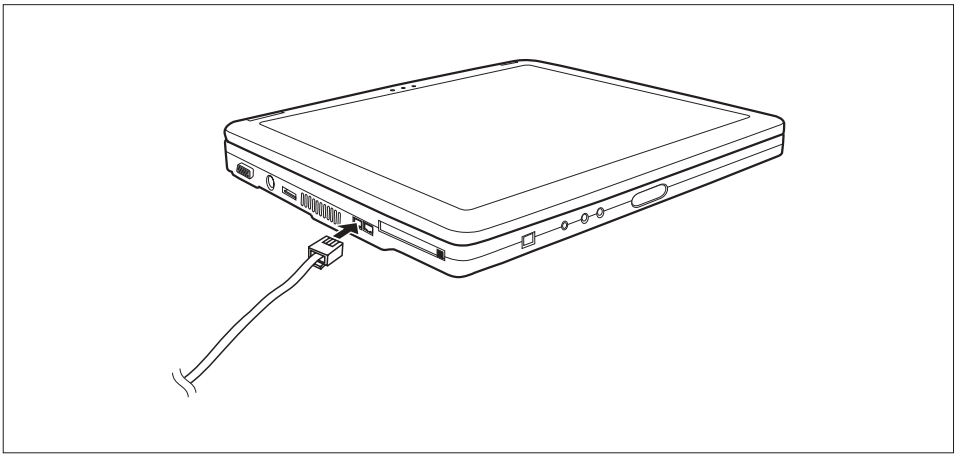
The modem can be operated in the following countries:

Multifrequency (MFC) dialling
Belgium, Denmark, Germany, Finland, France, Greece, Great Britain, Holland, Ireland, Iceland, Italy, Luxembourg, Norway, Austria, Portugal, Sweden, Switzerland and Spain.

Pulse dialling:
Belgium, France, Holland and Italy.

Also in: Poland, Slovenia, South Africa and Hungary.

Connecting notebook modem to telephone connection



- ► Connect the modem cable supplied to the country-specific telephone adapter.
- ► Connect the modem cable to the modem port of the notebook.
- ► Connect the modem cable to your telephone wall socket.

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If you attach your modem on a TAE-N-connector the phone respectively data cable is busy. The cable cannot be used for other communication devices at the same time. Pull the modem plug out of the TAE-N-power socket after the data transfer, because also with connected cable no other communication devices can be used.

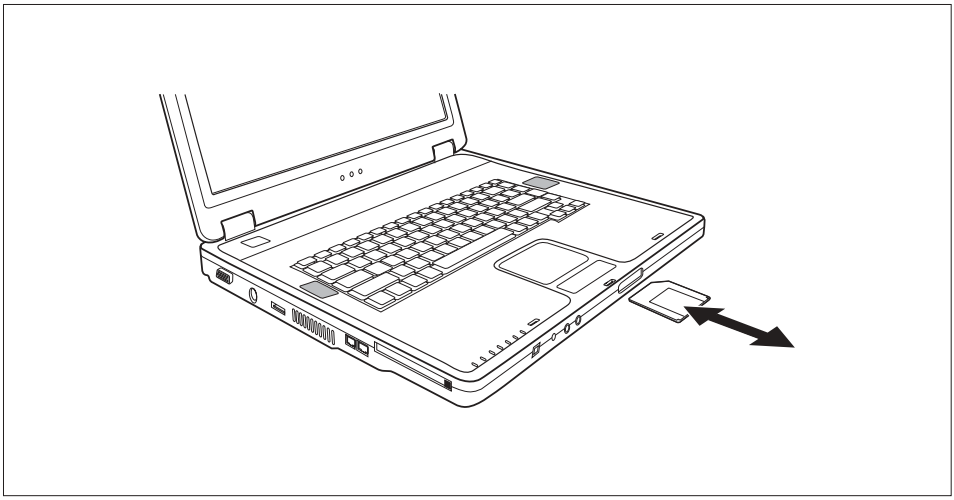
Memory card reader

Depending on the equipment level selected, your notebook may be equipped with a memory card reader. Your memory card reader supports the following formats:

- Secure Digital
- MultiMediaCard
- Memory Stick

Using memory cards

Observe the manufacturer's information when using memory cards.



Inserting memory card

► Carefully push the memory card into the slot with the connection contacts first.

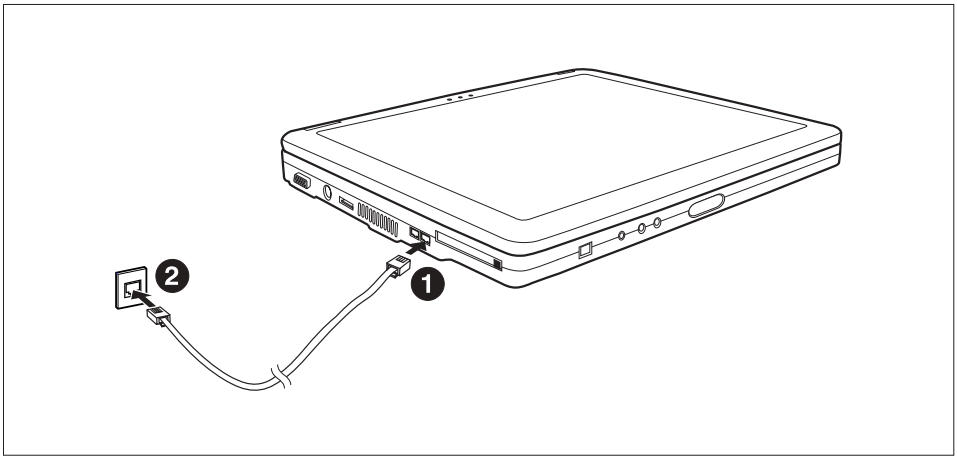
Removing memory card

The memory card indicator lights up when the memory card in the memory card reader is accessed. Do not remove the memory card from the slot when the memory card indicator lights up.

► Pull the memory card out of the slot.

Ethernet and LAN

The internal LAN module of your notebook supports Ethernet-LAN (10/100 Mbps).



► Connect the LAN cable to the notebook's LAN connector (1).

► Connect the network cable to your LAN network connector (2).

Wireless LAN

A Wireless LAN network card is integrated in your notebook.

► Press the key combination Fn + F1 to switch the wireless component on and off.

The wireless LAN indicator lights up green when the wireless component is switched on.

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For details, see the online help for your wireless LAN software and the "Wireless LAN" manual (the "Wireless LAN" manual is provided on the "Drivers & Utilities" CD).

Please take note of the information in the section "Additional safety precautions for devices with wireless LAN", "Important notes" chapter.

Security functions

Your notebook enables you to protect your system and personal data in a number of ways against unauthorised access. By combining these options, you can achieve maximum protection for your system.

In this chapter you will learn which security functions your notebook is equipped with, which advantages these functions offer you and how to configure and use them.

Please consider that in the case of improper use, you yourself will also be unable to access your system and your data. Please note therefore the following hints:

- Back up your data on external data carriers at regular intervals.
- Passwords must be assigned for some security functions. Please be sure to note these passwords, as otherwise you will no longer be able to access your system. We recommend that you make a note of the passwords and keep them in a safe place.

If you lose both the user and the admin passwords, you must contact our help desk. The telephone numbers are contained in the supplied help desk list. The loss of passwords is not a warranty case and is therefore subject to charge.

Overview of all security functions

The following sections contain a brief description of the security functions that are provided with your notebook as standard equipment.

Kensington Lock

With the Kensington MicroSaver, a sturdy steel cable, you can protect your notebook from theft. For this reason your notebook is equipped with a device for the Kensington MicroSaver. The Kensington MicroSaver is available as an accessory.

BIOS password protection

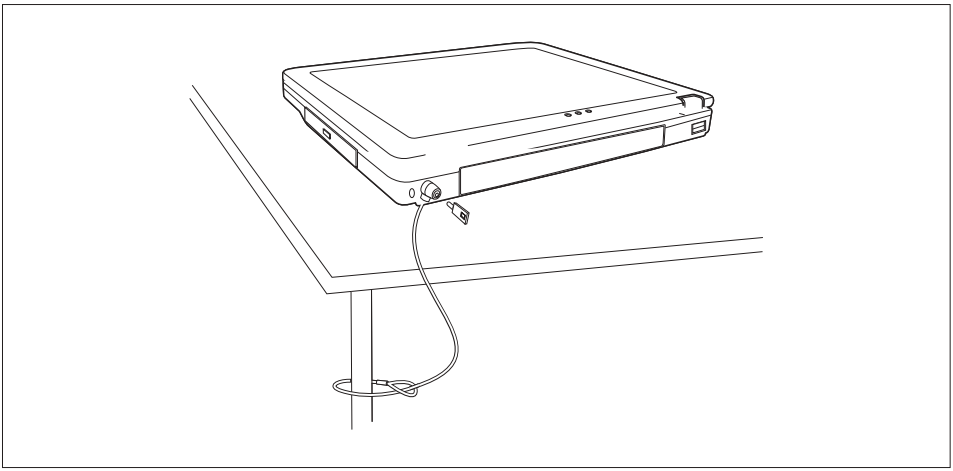
You can protect you personal data from unauthorised access with various passwords. By combining these different options, you can achieve maximum protection for your system.

Brief overview of the security functions

Security function	Type of protection	Preparation
Kensington Lock	Mechanical	Mount and lock Kensington MicroSaver (accessory)
BIOS password protection	Password protection for *BIOS Setup Utility* and operating system with admin password. The password consists of a maximum of eight alphanumeric characters.	Specify the admin password and, if desired, activate the password protection for the operating system in the *BIOS Setup Utility*.

Using Kensington Lock

With the Kensington MicroSaver, a sturdy steel cable, you can protect your notebook from theft. For this reason your notebook is equipped with a device for the Kensington MicroSaver. The Kensington MicroSaver is available as an accessory.



► Fit the Kensington MicroSaver on the device on your notebook.

Configuring password protection in BIOS Setup Utility

Before using the various options of password protection for your data security in the *BIOS Setup Utility*, please note the following hints:

- Be sure to note your admin password, as if you forget your admin password, you cannot access your *BIOS Setup Utility* and/or your system.
  Deleting the password does not represent a warranty case and is therefore subject to charge.
- Back up your data on external data carriers at regular intervals.

If you have opened these operating instructions on the screen, we recommend that you print out the following instructions. Because you cannot call the instructions onto the screen while you are setting up the password.

The admin password prevents unauthorized calling of the *BIOS Setup Utility* and/or access to the operating system.

The password can be at most eight characters long. You can use all alphanumeric characters and need not distinguish between uppercase and lowercase characters.

Please refer to section "Settings in BIOS Setup Utility" for a description of calling and operating the *BIOS Setup Utility*.

Entering the admin password

► Call the *BIOS Setup Utility*.

► Select the *Security* menu and press the Enter key.

► Mark the *Set Admin Password* field and press the Enter key.

► Enter the password in the *Enter new Admin Password* field and press the Enter key.

With *Verify new Admin Password* you are asked to confirm the password.

► Enter the password again and press the Enter key.

► Press the Space key to activate the *Boot System* field if you want to use the admin password to prevent unauthorized startup of the operating system.

and/or

► Press the Space key to activate the *Enter BIOS* field if you want to use the admin password to prevent unauthorized calling of the *BIOS Setup Utility*.

You must activate at least one field to switch password protection on.

► Press the Enter key to confirm the setting.

If you do not want to make any other settings, you can exit *BIOS Setup Utility*.

► Select the *Save Changes and Exit* option in the *Exit* menu.

► Select *OK* and press the Enter key.

The notebook is rebooted and the new password is effective.

Changing the admin password

► Call *BIOS Setup Utility* and select the *Security* menu.

► When changing the password, proceed exactly as for password assignment.

You can only change the admin password if you have logged on with the admin password.

Canceling the admin password

To cancel the admin password (without setting a new password) run the following steps:

► Call the *BIOS Setup Utility*.

► Select the *Security* menu and press the Enter key.

► Enter the password in the *Enter old Admin Password* field and press the Enter key.

► Confirm the *Enter new Admin Password* and *Verify new Admin Password* fields with the Enter key.

► Use the Space key to deactivate the *Boot System* field.

and/or

► Use the Space key to deactivate the *Enter BIOS* field.

The password protection is only switched off if both fields are deactivated.

► Select the *Save Changes and Exit* option in the *Exit* menu.

► Select *OK* and press the Enter key.

The notebook is rebooted and the admin password is cancelled.

Connecting external devices

Under all circumstances, please observe the safety notes provided in the "Important notes" chapter.

Read the documentation on the external device before connecting it.

Do not connect or disconnect cables during a thunderstorm.

Do not pull on the cable when disconnecting a cable. Always take hold of the actual plug.

Adhere to the order described in the following when you connect external devices to the notebook or separate them from the notebook:

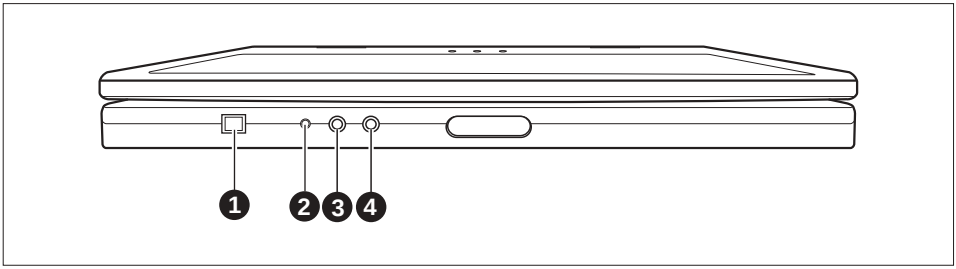
Connecting devices to notebook

1. Turn off all power and equipment switches.
2. Remove all power plugs from the mains outlets.
3. Connect all the cables to the notebook and the external devices.
4. Plug all data communication cables into the utility sockets.
5. Plug all power cables into the mains supply.

Disconnecting devices from notebook

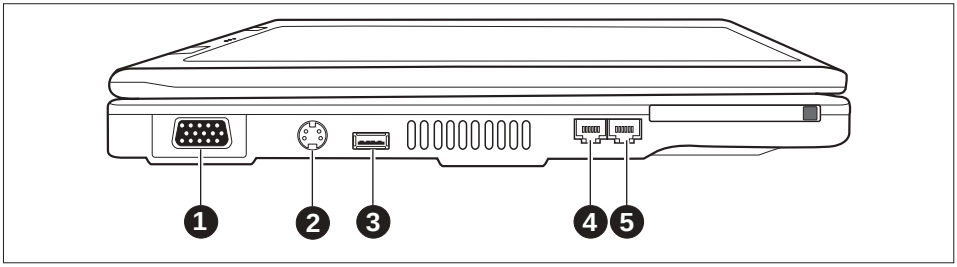
1. Turn off all power and equipment switches.
2. Remove all power plugs from the mains outlets.
3. Unplug all data communication cables from the utility sockets.
4. Disconnect all the cables from the notebook and the external devices.

Ports on the front



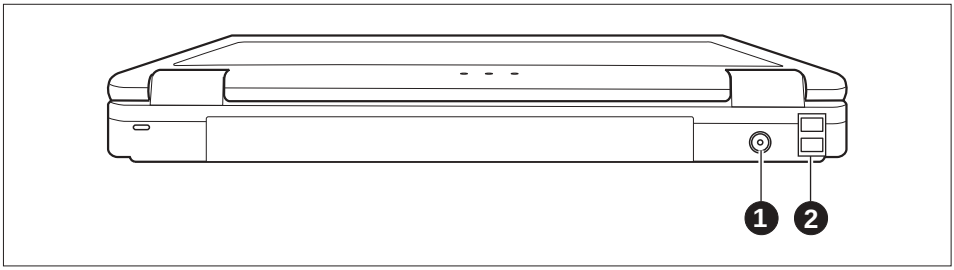
1 = FireWire port
2 = SPDIF port
3 = Line-In
4 = Microphone jack

Connections on the left side



1 = Monitor port
2 = S Video out socket
3 = USB port
4 = Modem port
5 = LAN port

Connections on the rear



1 = DC jack (DC IN) 2 = USB ports

Some of the external devices require special drivers (see the operating system and external device documentation).

Connecting an external monitor

An external monitor can be connected to the notebook.

- Using the Fn + F5 key combination you can switch back and forth between the external monitor and the LCD screen.
- If your notebook is equipped with a TFT monitor, you can display the same picture on the external monitor and the LCD screen simultaneously.

► Switch off the notebook and the external monitor.

► Connect the external monitor to the monitor port on your notebook.

► First switch on the monitor and then the notebook.

Setting the refresh rate for your external monitor

The refresh rate must be correctly set so that the image does not flicker.

► Select the monitor type in the menu *Start - Control Panel - Appearance and Themes - Display - Settings - Advanced - Display*.

► Now select the *Adapter* tab.

► Adjust the refresh rate and then click *Apply*.

If the refresh rate set is too high, the monitor may be damaged. Please see the documentation included with your monitor for the maximum possible refresh rate.

Connecting USB devices

On the USB ports you can connect external devices that also have a USB port (e.g. a printer, a scanner or a modem).

i

USB devices are hot-pluggable. This allows cables from USB devices to be connected and disconnected with the system switched on.

USB 1.x has a maximum data transfer rate of 12 Mbit / s.

USB 2.x has a data transfer rate of up to 480 Mbit/s.

Additional information can be found in the documentation for the USB devices.

► Connect the data cable to the external device.

► Connect the data cable to a USB port of the notebook.

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Device drivers

The devices you connect to the USB ports usually require no driver of their own, as the required software is already included in the operating system. However, if the USB device requires its own software, please install it from the data carrier provided with the USB device.

Connecting external audio devices

Headphones port

Via the headphone port you can connect either headphones or external loudspeakers to your notebook.

Microphone jack

Via the microphone port you can connect an external microphone to your notebook.

Adjusting the volume

► Set the desired volume with the volume control.

Or

► To adjust the volume use the Windows volume control from the *Start* menu - *All Programs* - *Accessories* - *Multimedia* - *Volume Control*.

Connecting an external device to S-Video Out

A television set can be connected to the notebook.

With the key combination Fn + F5 you can switch between the television set and the LCD screen of the notebook.

► Switch off the notebook and the external device.

► Connect the external monitor to the S-Video out socket of your notebook.

► First switch on the monitor and then the notebook.

Activating the external TV

► Select the monitor type in the menu *Start - Control Panel - Appearance and Themes - Display - Settings - Advanced - Displays*.

► Click on *Apply*.

Connecting FireWire devices

External devices such as digital audio/video devices or other high-speed devices can be connected to the FireWire port. The FireWire port operates at a speed of 400 Mbit per second.

FireWire devices are hot-pluggable. Therefore, the cables of FireWire devices can be connected and disconnected with the system switched on.

Additional information is provided in the documentation of the FireWire devices.

► Connect this data cable of the external devices to the FireWire port of the notebook.

► Plug the power cable of the external device into the mains outlet.

Settings in BIOS Setup Utility

In *BIOS Setup Utility* you can set the system functions and the hardware configuration of the notebook.
When it is delivered, the notebook is set to factory default settings. You can change these settings in *BIOS Setup Utility*. Any changes you make take effect as soon as you save and quit the *BIOS Setup Utility*.

The *BIOS Setup Utility* programme contains the following menus:

Main:	for system settings such as time and date
Advanced:	for settings for system upgrades
Boot:	for configuring the boot sequence
Security:	for password settings and safety functions
Exit:	to exit the *BIOS Setup Utility*

Start BIOS Setup Utility

► Restart the notebook (switching ON/OFF or warm boot).

The following or a similar display appears on the screen during booting:

```
<F2> BIOS Setup   <F12> Boot Menu
```

► When this message appears, press the function key **F2**.

i

If a password has been assigned:

► Enter the password and press the Enter key.

If you have forgotten the password, contact your system administrator or contact our customer service centre.

Operating BIOS Setup Utility

► Use the cursor key ← or → to select the menu you wish to access to make changes and press the Enter key.

The menu is displayed on the screen.

► Use the cursor key ↑ or ↓ to select the field you wish to change.

► Press the Enter key.

► Press the **ESC** key to exit the selected menu.

► For future reference, make a note of the changes you have made (for example, in this manual).

Exiting BIOS Setup Utility

To exit *BIOS Setup Utility*, select the *Exit* menu from the menu bar. You can then decide which settings you want to save. The *Exit* menu offers the following options.

You must mark the required option and activate it with the Enter key.

Save the settings and exit the BIOS Setup Utility - Save Changes and Exit

Select *Save Changes and Exit* and *OK* to save the current settings and exit the *BIOS Setup Utility*. The device is rebooted and the new settings come into effect.

Get Default Values

To revert all the menus of *BIOS Setup Utility* to the default entries, select *Get Default Values* and *OK*.

Load Previous Values

Select *Load Previous Value* to discard the changes you have made. The settings which were in force when *BIOS Setup Utility* was called remain effective.

Discard Changes and Exit

To load the values of all the menus of *BIOS Setup Utility* that were in effect when *BIOS Setup Utility* was called, select *Discard Changes and Exit* and *OK*.

The *BIOS Setup Utility* is ended and the device boots.

Troubleshooting and tips

Take note of the hints in the "Important notes" chapter, when you connect or disconnect cables.

If a fault occurs, try to correct it as described. If you fail to correct the problem, proceed as follows:

- ► Make a note of the steps and the circumstances that led to the fault. Also make a note of any error messages displayed.
- ► Switch the notebook off.
- ► Contact your sales outlet or our hotline/help desk.

Restoring operating system

Using the Windows Recovery CD and the Drivers & Utilities CD, you can restore the operating system of your notebook.

When restoring the operating system the contents of your hard disk will be overwritten. After this, operating system, drivers and software utilities will be reinstalled. For this reason you should try to save important data to a backup medium before you restore the hard disk contents.

- ► Insert the Windows Recovery CD into the optical drive.
- ► Start the *Setup* programme on the CD.

Detailed PC knowledge is required for manual partitioning.

You must then reinstall all the drivers. Use the "Drivers & Utilities" CD.

The notebook's date or time is incorrect

- ► Set the time and/or date in the *BIOS Setup Utility* under *Main - Date and Time*.

If the date and time are repeatedly incorrect when you switch on the notebook, the buffer battery that supplies the internal clock is dead.

Contact your sales outlet or our hotline/help desk.

The LCD screen of the notebook remains blank

Monitor is switched off

► Press a key or enter the password

The LCD screen is difficult to read

Reflection

► Turn the notebook or alter the tilt of the LCD screen.

The external monitor stays blank

If your screen remains blank this may be due to the following:

Monitor is switched off

► Switch the external monitor on.

Power saving has been activated (screen is blank)

► Press any key to continue.

Brightness is set too dark

► Adjust the brightness of the monitor.

Screen output is set to the notebook’s LCD screen

► Press the key combination Fn + F5 (selecting internal/external display).

The external monitor's power cable or data cable is not connected properly

► Switch off the external monitor and the notebook.

► Check whether the power cable is plugged properly into the external monitor and into the power socket.

► Check whether the data cable is properly connected to the notebook and the external monitor (if it is plugged in with a connector).

► Switch on the external monitor and the notebook.

The external monitor is blank or the image is unstable (under Windows)

The wrong external monitor has been selected or the wrong screen resolution has been set for the application programme.

► Terminate the application programme under Windows with Alt + F4.
If the fault continues to occur after ending the programme, switch over to the notebook's internal LCD screen with Fn + F5. Change the following setting:

► Select the correct monitor or set the correct screen resolution.

– Setting the screen resolution: select the required screen resolution under *Start - Control Panel -Appearance and Themes - Screen Resolution - Settings*.

– Selecting the monitor: Select the correct monitor under *Start - Control Panel - Appearance and Themes - Display - Settings - Advanced - Display*.

The notebook cannot be started

The battery is dead

► Charge the battery.

Or

► Connect the power adapter to the notebook.

The power adapter is not connected correctly

► Switch the notebook off.

► Check whether the power adapter is connected correctly to the notebook.

► Check whether the power cable is plugged properly into the power adapter and into the mains outlet.

► Switch the notebook on.

Operating system files may be damaged or missing.

► Boot the notebook via the optical drive using the Windows Recovery CD.

If the operating system is reinstalled, all data created up to that point will be lost. Make regular back-up copies of your data.

The notebook stops working

The notebook is in Standby or Suspend mode

► Reactivate the notebook by pressing a key (Standby mode) or by switching it back on (Suspend mode).

An application programme has caused the malfunction

► Close the application programme or restart the notebook by switching it on/off or with a warm boot.

The battery is dead

► Charge the battery.

Or

► Connect the power adapter to the notebook.

The mouse does not work

Mouse driver not loaded

► Check whether the correct mouse driver is properly installed and is present before the application programme is started.
Detailed information can be found in the User Guides for the mouse, the application programme or the operating system.

Mouse is not connected

► Switch the notebook off.

► Check whether the mouse cable is correctly connected to the notebook.
If you use an adapter or extension lead with the mouse cable, check the connections.

► Switch the notebook on.

The printer does not print

► Make sure that the printer is switched on and is on-line (see the manuals supplied with the printer).

► Check that the cable connecting the notebook and the printer is connected properly.

► Check that the correct printer driver is installed.

The DVD film does not continue to play

Should the picture freeze when playing some DVD films, deactivate the accelerated hardware decryption (it is activated in the default setting; this can be recognised from the checkmark in the corresponding checkbox).

- ► Open the drive tray.
- ► Place the DVD in the drive tray with the label facing upwards.
- ► Push in the drive tray until you feel it lock into place.
- ► Wait until the WinDVD starts.
- ► Press the right mouse button or touchpad key.

A context menu appears.

- ► Click on *Configuration* and then on *Video*.
- ► Click on the checkmark in the checkbox of *Hardware Acceleration*.

The checkmark disappears.

- ► Click on *OK*.

The function is now deactivated.

Acoustic warnings

A beep sounds every few seconds

The battery is almost flat.

- ► Charge the battery.

System configuration contains invalid data

- ► Switch the notebook off.
- ► Switch the notebook on.
- ► Enter the *BIOS Setup Utility* programme by pressing **F2**.
- ► Select the entry *Get Default Values* in the *Exit* menu and press the Enter key.
- ► Select *OK* and press the Enter key.
- ► Select the entry *Save Changes and Exit* in the *Exit* menu and press the Enter key.
- ► Select *OK* and press the Enter key.

If the error message appears repeatedly, please contact the place of purchase or our hotline/help desk.

Error messages on the screen

This section describes the error messages generated by the *BIOS Setup Utility*. Error messages displayed by the operating system or programmes are described in the relevant manuals.

CMOS Battery Bad

If the error message occurs repeatedly, then the buffer battery in the notebook is flat. Contact your sales outlet or our hotline/help desk.

System CMOS checksum bad - Default configuration used

The system configuration information is incorrect.

- ► Switch the notebook off.
- ► Switch the notebook on.
- ► Enter the *BIOS Setup Utility* programme by pressing F2.
- ► Select the entry *Get Default Values* in the *Exit* menu and press the Enter key.
- ► Select *OK* and press the Enter key.
- ► Select the entry *Save Changes and Exit* in the *Exit* menu and press the Enter key.
- ► Select *OK* and press the Enter key.

If the error message appears repeatedly, please contact the place of purchase or our hotline/help desk.

Extended memory failed at offset: xxxx Failing Bits: zzzz zzzz

When testing the extended memory an error has resulted at the address xxxx.

- ► Check whether the additional memory module has been inserted correctly.

If the error message appears repeatedly, please contact the place of purchase or our hotline/help desk.

Keyboard controller error

- ► Switch the notebook off with the ON/OFF switch.
- ► Wait 3 - 5 seconds and switch on the notebook again.

If the error message appears repeatedly, please contact the place of purchase or our hotline/help desk.

Keyboard error

If you use an external keyboard:

- ► Check the connection and reboot the notebook.

If the error message appears repeatedly, please contact the place of purchase or our hotline/help desk.

nn Stuck key

- ► Make sure that no key is pressed.

If the error message appears repeatedly, please contact the place of purchase or our hotline/help desk.

Press <F1> to resume, <F2> to SETUP.

This error message appears if an error occurs during the self-test before starting the operating system.

► Press the F1 function key to start the operating system.

► Enter the *BIOS Setup Utility* programme by pressing F2.

Real Time clock error

► Contact your sales outlet or our hotline/help desk.

nnnnK Shadow RAM failed at offset: xxxx Failing Bits: zzzz

► Contact your sales outlet or our hotline/help desk.

System battery is dead - Replace and run SETUP

► Contact your sales outlet or our hotline/help desk.

System cache error - Cache disabled

► Contact your sales outlet or our hotline/help desk.

nnnnK System RAM failed at offset: xxxx Failing Bits: zzzz

If the error message appears repeatedly, please contact the place of purchase or our hotline/help desk.

System timer error

► Contact your sales outlet or our hotline/help desk.

Technical data

Notebook

Processor:	Intel Pentium-M up to 1.9 GHz
Main memory:	Maximum 1 Gbyte DDR266/333 SDRAM SO-DIMM 200 Pin 2 slots for 256 or 512 Mbyte modules
Disk drives:	Hard disk drive Optical drive

Electrical data

Regulations complied with:	CE, Energy Star
Maximum power draw: (notebook on with battery charging)	approx. 60 W

LCD screen

Display diagonal:	15.4 inch Wide WXGA TFT

Graphics

Chip:	Ati M10
Video memory:	128 MB
Supported resolutions on external monitor:	1600 x 1200
Colour depth:	true color

Audio

Sound:	18-bit stereo audio (AC'97)

Input devices

Keyboard:	88 keys
Touchpad:	1 toggle switch

Slots

PC Card slots (CardBus/PCMCIA):	CardBus 1 x type II
Memory card reader	Flash Card Port SD/MS/MMC

Ports

Monitor port:	15-pin female connector
Microphone jack:	connector, mono
Headphone/loudspeaker connector:	connector, stereo
S-Video out:	7-pin female connector
USB port (Universal Serial Bus):	3x 2.0
LAN connector:	Female connector, RJ-45
Modem port:	Female connector, RJ-11
FireWire port:	S400, 4-pin
SPDIF port:	connector, stereo
Kensington Lock	

Environmental conditions

Environment class 7K1

Mechanical class 7M2

Temperature:

● Operating (7K1)	5 °C .... 35 °C
● Transport (2K2)	-10 °C .... 60 °C
Humidity:	20 % .... 85 %

Dimensions

Width/depth/height:	353.8 mm, 250 mm, 25 to approx. 32 mm
Weight (depending on configuration):	approx. 3 kg

Battery

Charging time (when not in operation):	approx. 3,0 hours
Operating time:	approx. 2,5 hours

60 W/65 W power adapter

Main

● Rated voltage:	110 V to 260 V (automatic)
● Frequency:	50 Hz to 60 Hz (automatic)

Sub

● Rated voltage:	19 V
● Max. rated current:	3.16 A (60 W power adapter) 3,42 A (65 W power adapter)

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